

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

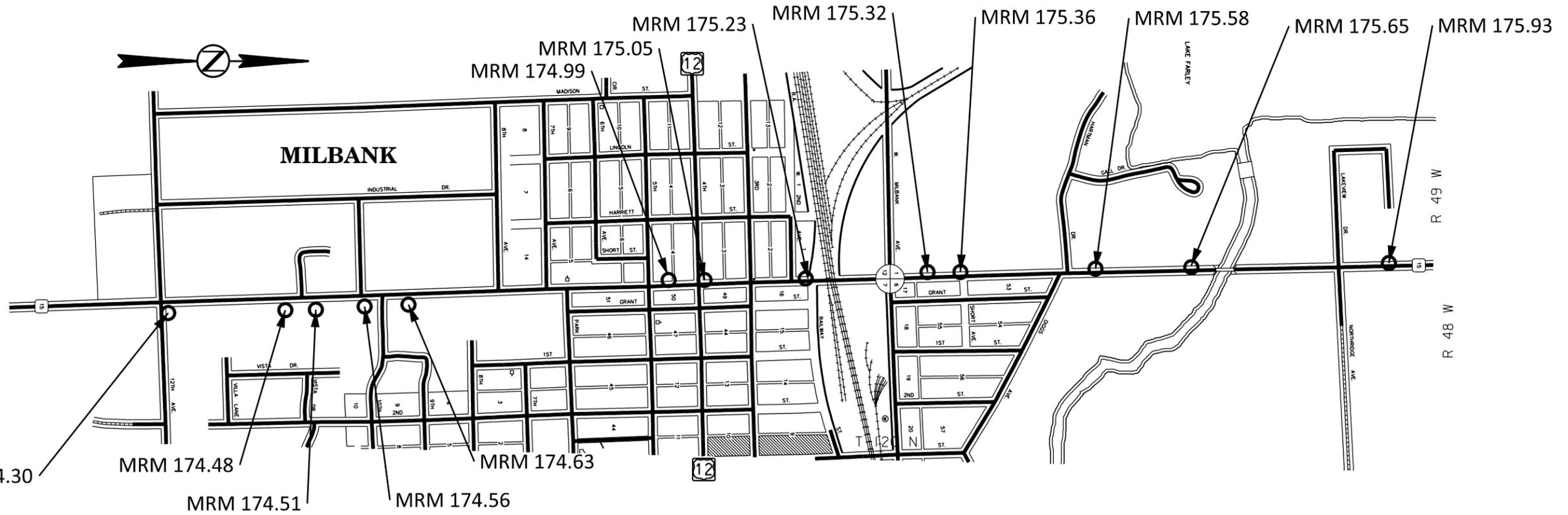
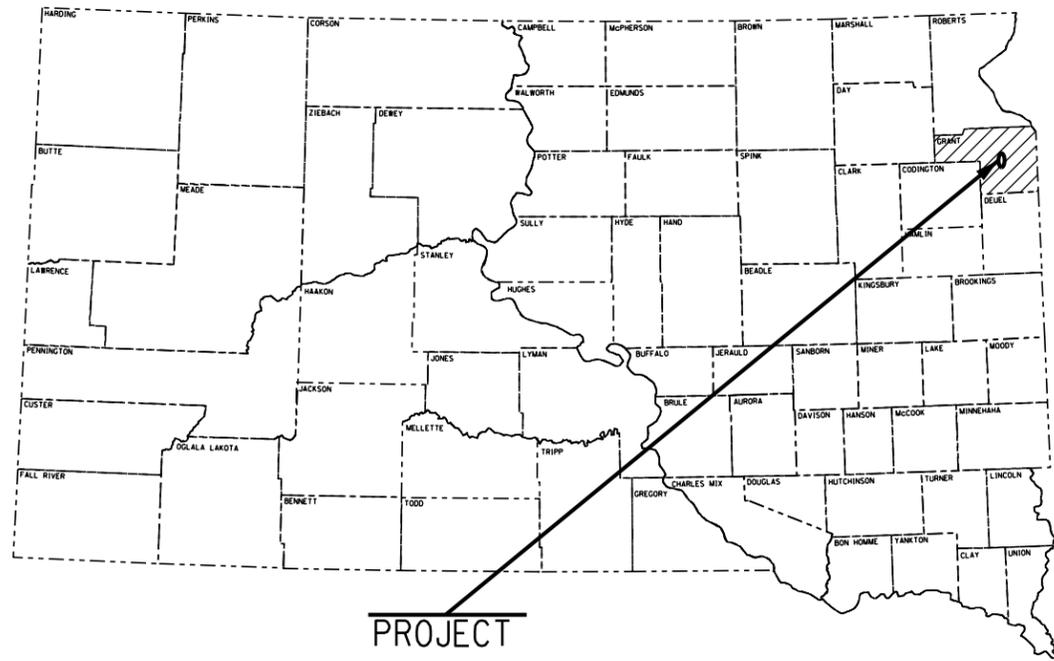
PLANS FOR PROPOSED
PROJECT 015-172
S.D. HIGHWAY 15
GRANT COUNTY

SIDEWALK REPAIR
PCN i78A

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	015-172	1	16
Plotting Date: 05/04/2023			

INDEX OF SHEETS

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○ Sidewalk Repair Location

DESIGN DESIGNATION

ADT (2022)	2284
ADT (2042)	3120
DHV	346
D	50%
T DHV	3.6%
T ADT	7.8%
V	30 M.P.H.

STORM WATER PERMIT
NONE REQUIRED

PLOT SCALE - 1:1850

PLOTTED FROM - TRWAINT16

PLOT NAME - 1

FILE - ... \178U_TITLE SHEET2.DGN

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	015-172	2	16

ENVIRONMENTAL COMMITMENTS

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	189	Ft
110E1140	Remove Concrete Sidewalk	118.2	SqYd
380E6110	Insert Steel Bar in PCC Pavement	48	Each
634E0110	Traffic Control Signs	228.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	4	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E2000	Longitudinal Pedestrian Barricade	25	Ft
634E2015	Temporary Pedestrian Access Route	Lump Sum	LS
634E2020	Temporary Curb Ramp	4	Each
650E0080	Type B68 Concrete Curb and Gutter	155	Ft
650E4680	Type P8 Concrete Gutter	34	Ft
651E0040	4" Concrete Sidewalk	1,048	SqFt
651E0140	4" Reinforced Concrete Sidewalk	17	SqFt
670E1200	Type B Frame and Grate	1	Each

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥ 140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:

< <http://sdleastwanted.com/maps/default.aspx> >

< [South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04](https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04) >

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This project may be in the vicinity of multiple streams and wetlands. These waters are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	015-172	3	16

COMMITMENT D: WATER QUALITY STANDARDS (CONT.)

COMMITMENT D2: SURFACE WATER DISCHARGE (CONT.)

Action Taken/Required:

If construction dewatering is required and this project is currently covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the contractor will need to submit the dewatering information to the SDDANR using the following form:

https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_AddTemplateInfoFillable.pdf

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:

<http://denr.sd.gov/des/sw/WhatisaDMR.aspx> >

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to

project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above. The above requirements will not apply to waste disposal sites that are covered by an

individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

Sidewalk/Curb and Gutter Removal and Repair

SD15 MRM	L/R	Remove Concrete Sidewalk sqyd	4" Concrete Sidewalk sqft	4" Reinforced Concrete Sidewalk sqft	Remove Curb and Gutter ft	Type B68 Curb and Gutter ft	Type P8 Concrete Gutter ft	Insert Steel Bar in PCC Pavement ea	Type B Frame and Grate ea
175.93	L	10.8	97.5						
175.65	L	10.3	92.5		18.5	18.5			
175.58 N	L	11.4	102.5		20.5	20.5		5	
175.58 S	L	26.1	235		58.5	47	11.5	9	
175.36	L	12.8	115		34.5	23	11.5	14	
175.32	L				4.5	4.5			
175.23	L	2.5	22.5						
175.05	L				5.5	5.5			
174.99	L	11.1	100						
174.63	R	14.6	115	16.5	33.5	23	10.5	20	
174.56	R	5.8	52.5						
174.51	R				11	11			
174.48	R	2.5	22.5						
174.3	R	10.3	92.5		2	2			1
TOTALS		118.2 sqyd	1047.5 sqft	16.5 sqft	188.5 ft	155 ft	33.5 ft	48 ea	1 ea

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work.

The City of Milbank will be celebrating Lake Farley Days on July 28-29, 2023. No work will be allowed, and work enclosures will be removed during this time frame.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

STEEL BAR INSERTION

The Contractor will insert the Steel Bars (No. 5 x 18"/30" inch deformed tie bars) into drilled holes in the existing concrete pavement. Anchoring of the steel bars in the drilled holes will conform to the Specifications.

The steel bars will be cut to the specified length by sawing or shearing and will be free from burring or other deformations. All costs associated with this process will be paid for with the "Insert Steel Bar in PCC Pavement" bid item.

TABLE OF STEEL BAR INSERTION

LOCATION	QUANTITY OF BARS	
	18"	30"
MRM 175.58 N	5	-
MRM 175.58 S	5	4
MRM 175.36	10	4
MRM 174.63	10	10
Totals:	30	18

TEMPORARY PEDESTRIAN ACCESS ROUTE

A Temporary Pedestrian Access Route (TPAR) will be provided when crosswalks, sidewalks, or other pedestrian facilities are blocked, closed, or relocated. A TPAR may consist of a combination of existing and/or temporary pedestrian facilities. The TPAR will be kept free of any obstructions and hazards, such as holes, debris, mud, snow, construction equipment, traffic control signing, stored materials, etc.

The Contractor will facilitate Pedestrian Sidewalk Access along SD15 for both the 2 lane and 4 lane sections of this highway. The 2 lane section (North of US12 Intersection) of SD15 will require Temporary Curb Ramps and Longitudinal Pedestrian Barricades at each of the repair areas. These will be moved with the construction process. The 4 lane section (South of US12 Intersection) on SD15 has sidewalks on both sides of the highway. Proactive signing of a Closed Sidewalk Ahead at an Intersection or crossing will be required.

The Contractor will notify the Engineer at least 72 hours prior to start of any construction operation that will necessitate a change in pedestrian access. Pedestrian traffic signal displays controlling a crosswalk that is closed will be covered or removed.

All costs associated with installing and maintaining a temporary pedestrian access route, including temporary pedestrian sidewalk, will be incidental to the contract lump sum price for "Temporary Pedestrian Access Route".

TEMPORARY CURB RAMP

Temporary curb ramps should be firm, stable, and have a non-slip surface. They will not warp or buckle, and should be made of materials strong enough to support a weight of 800 pounds. Temporary curb ramps will be yellow or color contrasting and contain marked edges, so they are noticeable by pedestrians who have visual impairments. Lateral joints or gaps between surfaces will be a maximum of 0.5 inches in width. Temporary curb ramps will include detectable warning panels.

Temporary curb ramps will be the same width as the temporary pedestrian access route, with a recommended width of 60 inches and a minimum width of 48 inches. Temporary curb ramps will have a maximum slope of 8.3% and have free draining surfaces with a maximum cross slope of 2%. Handrails on temporary curb ramps are not required unless the curb ramp has a rise exceeding 6 inches and a length exceeding 72 inches.

All costs will be incidental to the contract unit price per each for "Temporary Curb Ramp".

LONGITUDINAL PEDESTRIAN BARRICADE

Longitudinal pedestrian barricades should not be used to provide positive protection for pedestrians.

To prevent any tripping hazard to pedestrians, ballast will be located behind or internal to the device.

When longitudinal pedestrian barricades are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock will be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. When used as a sidewalk closure mechanism, longitudinal pedestrian barricade must run the entire width of the sidewalk. Longitudinal pedestrian barricade should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Section 6F.68 of the MUTCD.

Longitudinal pedestrian barricade will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing. Both upper and lower surfaces will share a common vertical plane.

All costs will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barricade".

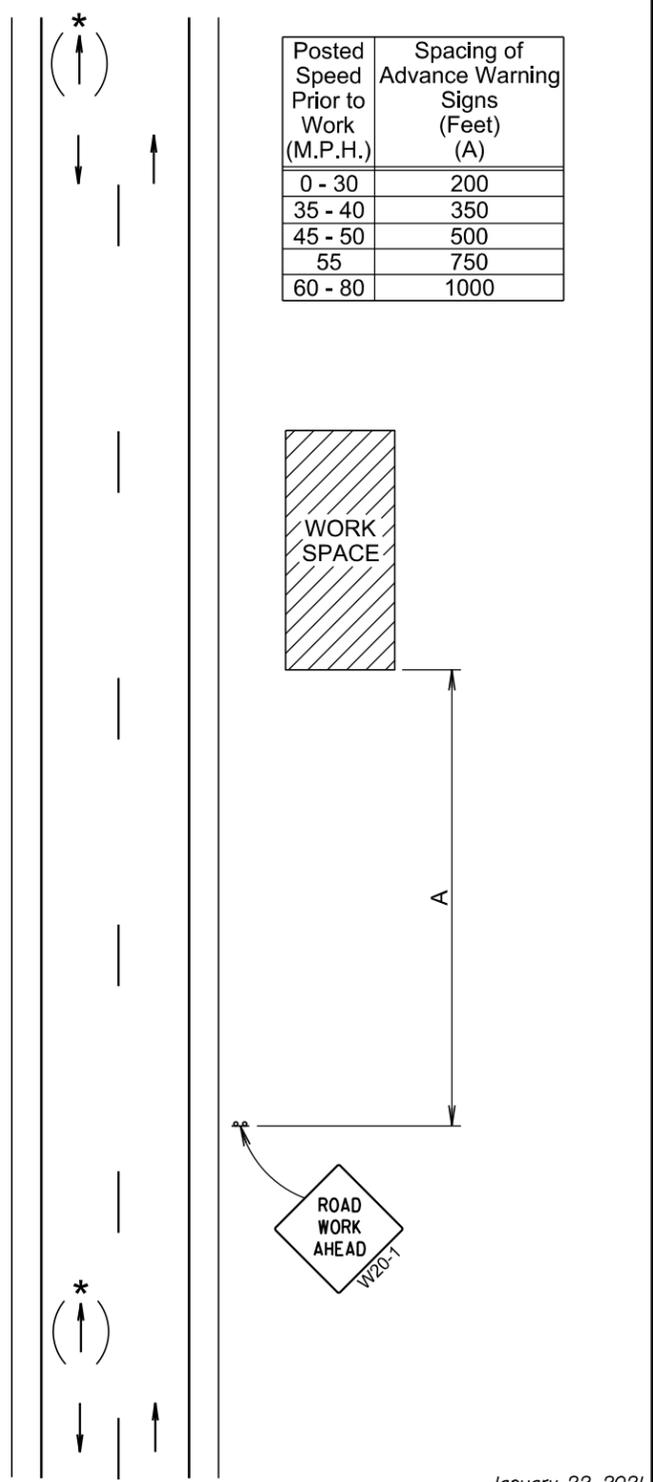
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

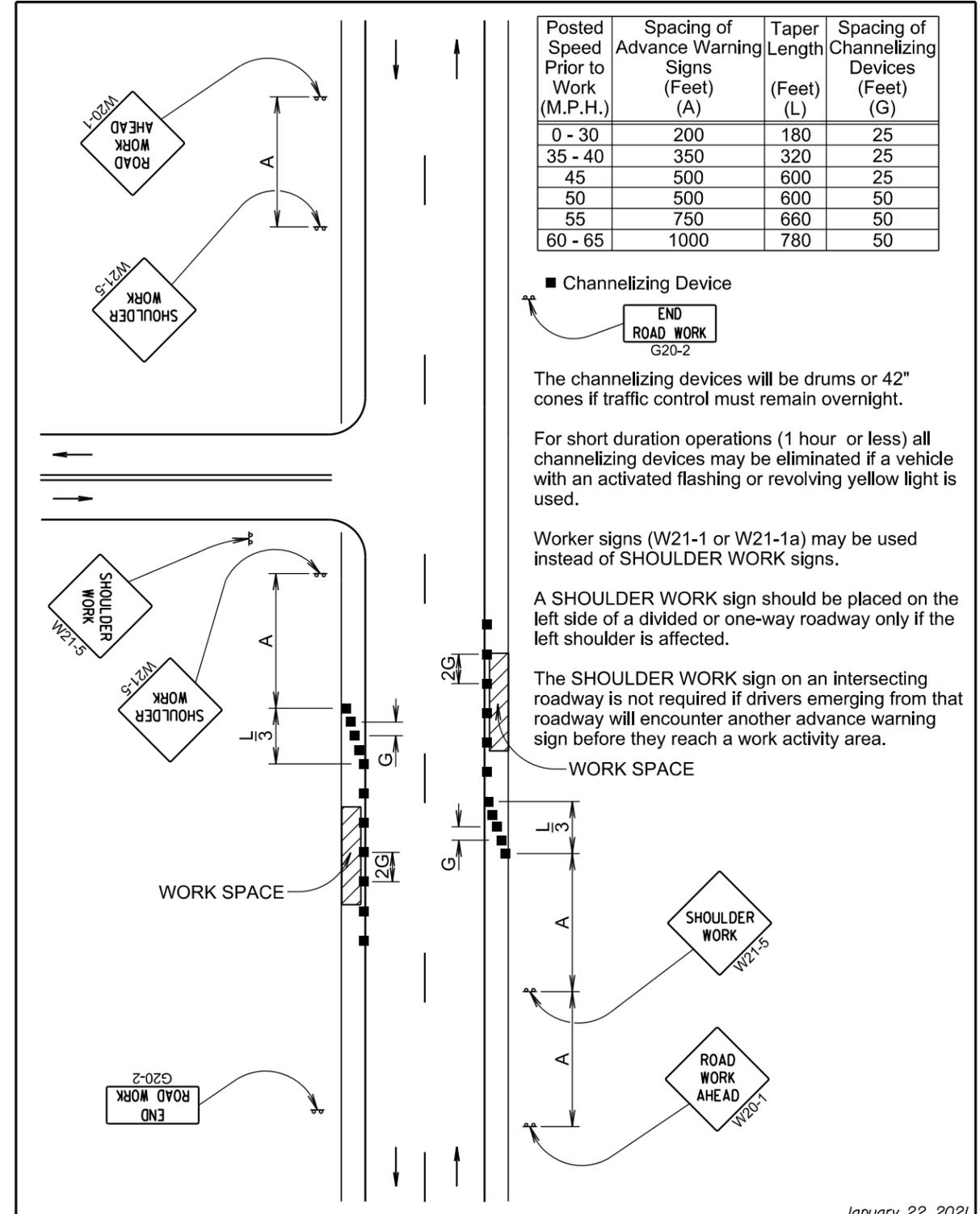
* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000

January 22, 2021



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device



The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

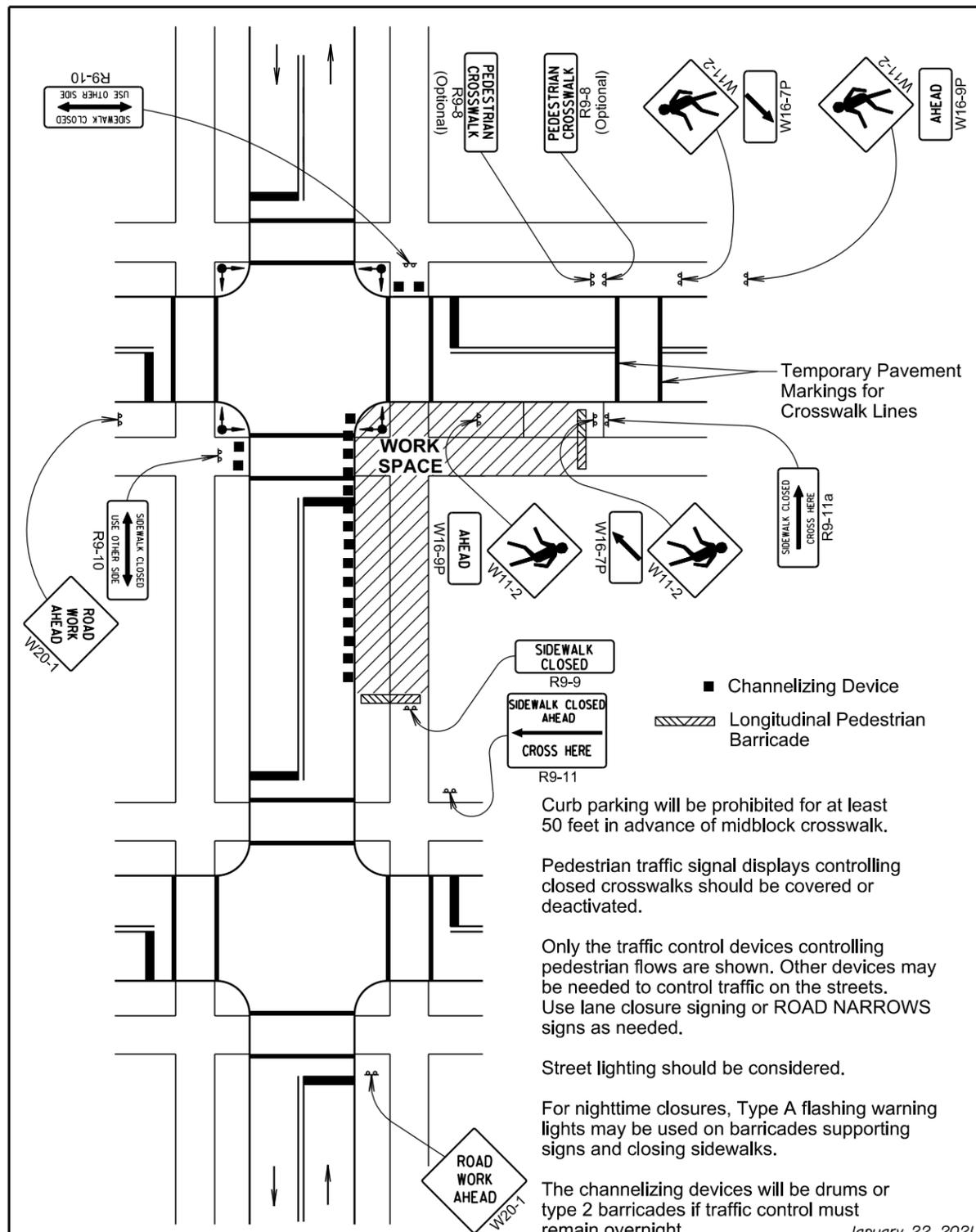
Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

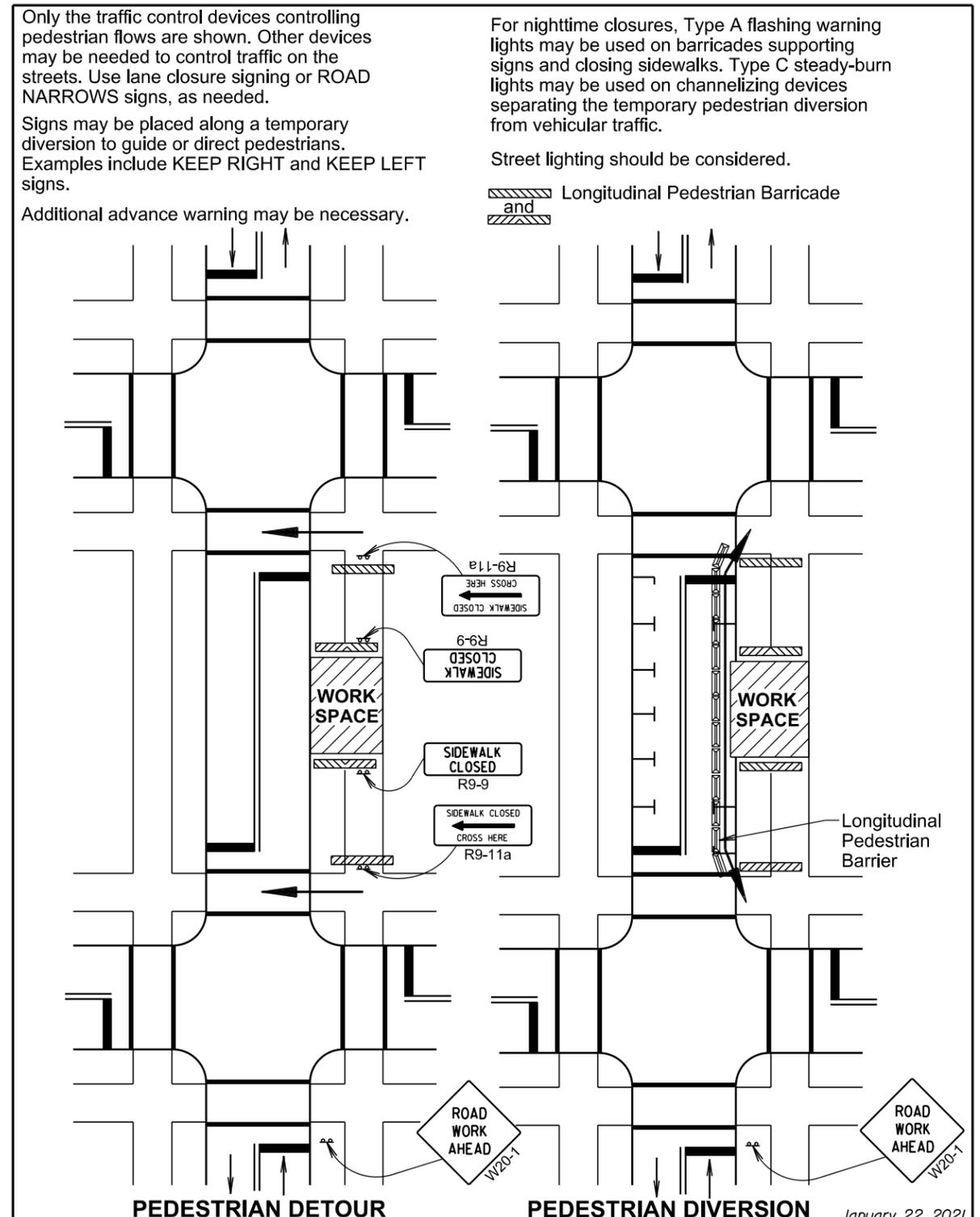
January 22, 2021

PLOTTED FROM - TRAB17882



January 22, 2021

Published Date: 1st Qtr. 2023	S D D O T	SIDEWALK CLOSURES AND PEDESTRIAN DETOURS	PLATE NUMBER
			634.33
			Sheet 1 of 1



Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs, as needed.

Signs may be placed along a temporary diversion to guide or direct pedestrians. Examples include KEEP RIGHT and KEEP LEFT signs.

Additional advance warning may be necessary.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks. Type C steady-burn lights may be used on channelizing devices separating the temporary pedestrian diversion from vehicular traffic.

Street lighting should be considered.

and
Longitudinal Pedestrian Barricade
and
Longitudinal Pedestrian Barrier

January 22, 2021

Published Date: 1st Qtr. 2023	S D D O T	PEDESTRIAN DETOUR AND PEDESTRIAN DIVERSION	PLATE NUMBER
			634.34
			Sheet 1 of 1

PLOTTED FROM - TRAB17882

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

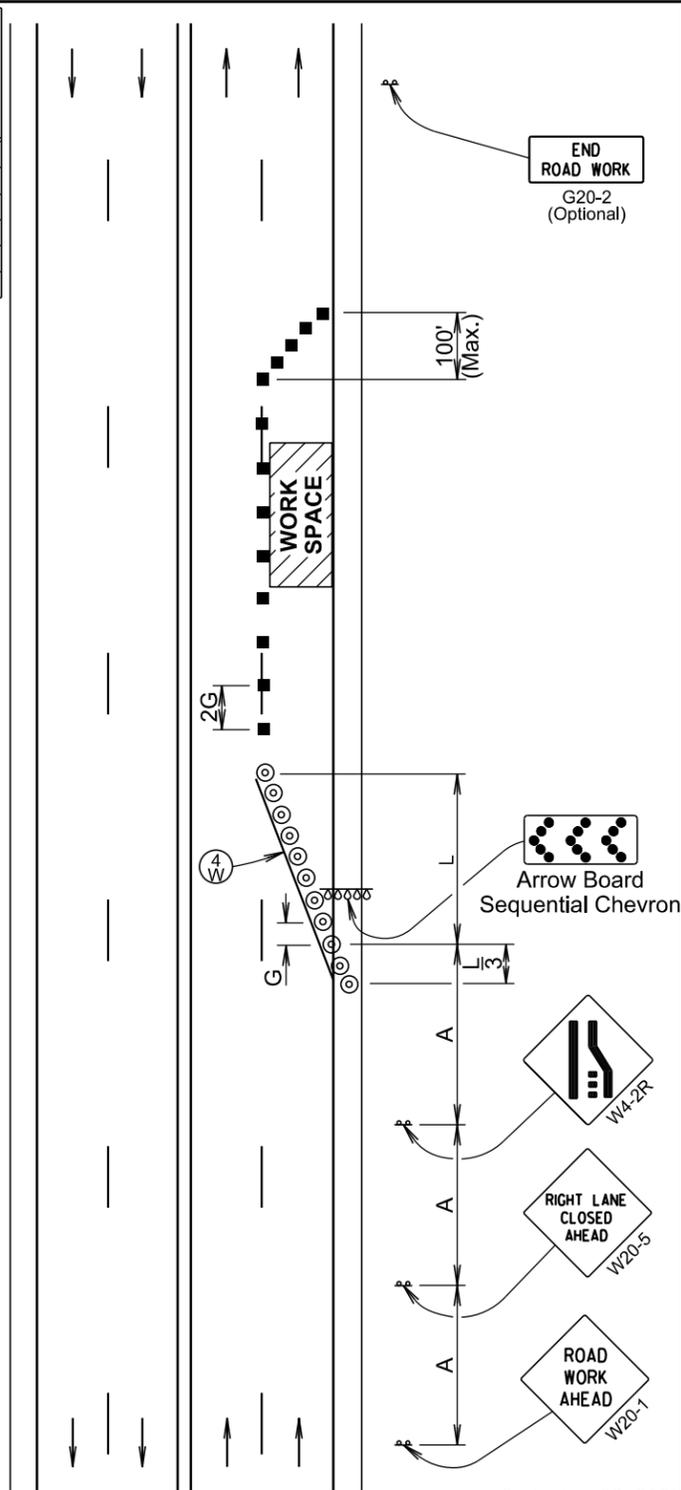
- ⊙ Reflectorized Drum
- Channelizing Device
- Ⓞ 4" White Temporary Pavement Marking

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

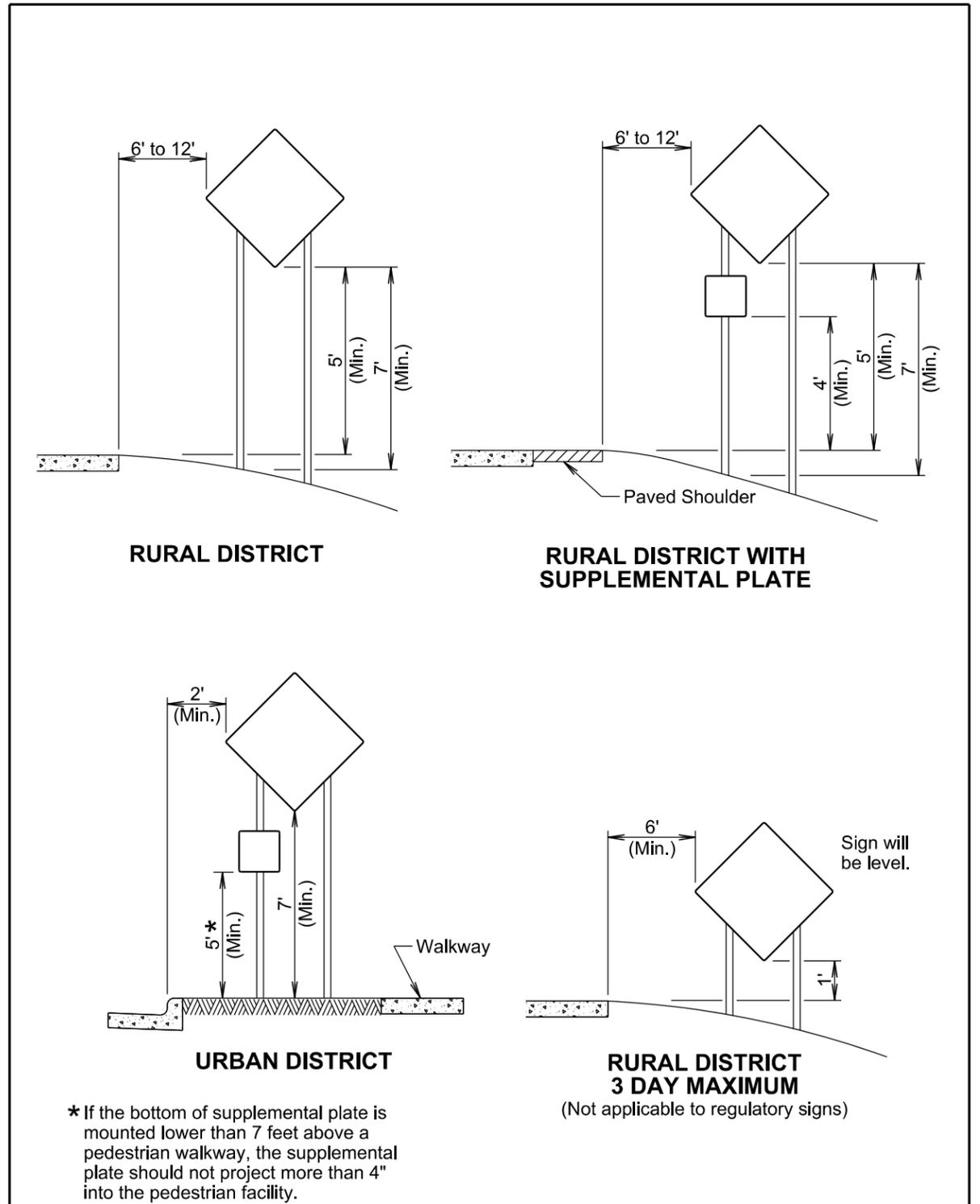
Temporary pavement markings will be used if traffic control must remain overnight.

The length of A and L may be adjusted to fit field conditions.



September 22, 2021

Published Date: 1st Qtr. 2023	S D D O T	4-LANE UNDIVIDED, RIGHT LANE CLOSED	PLATE NUMBER 634.47
			Sheet 1 of 1

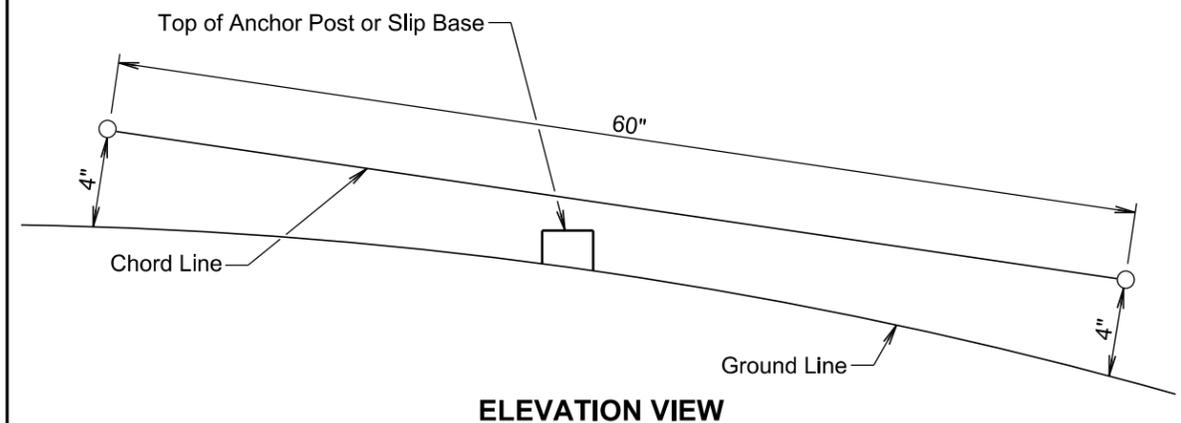
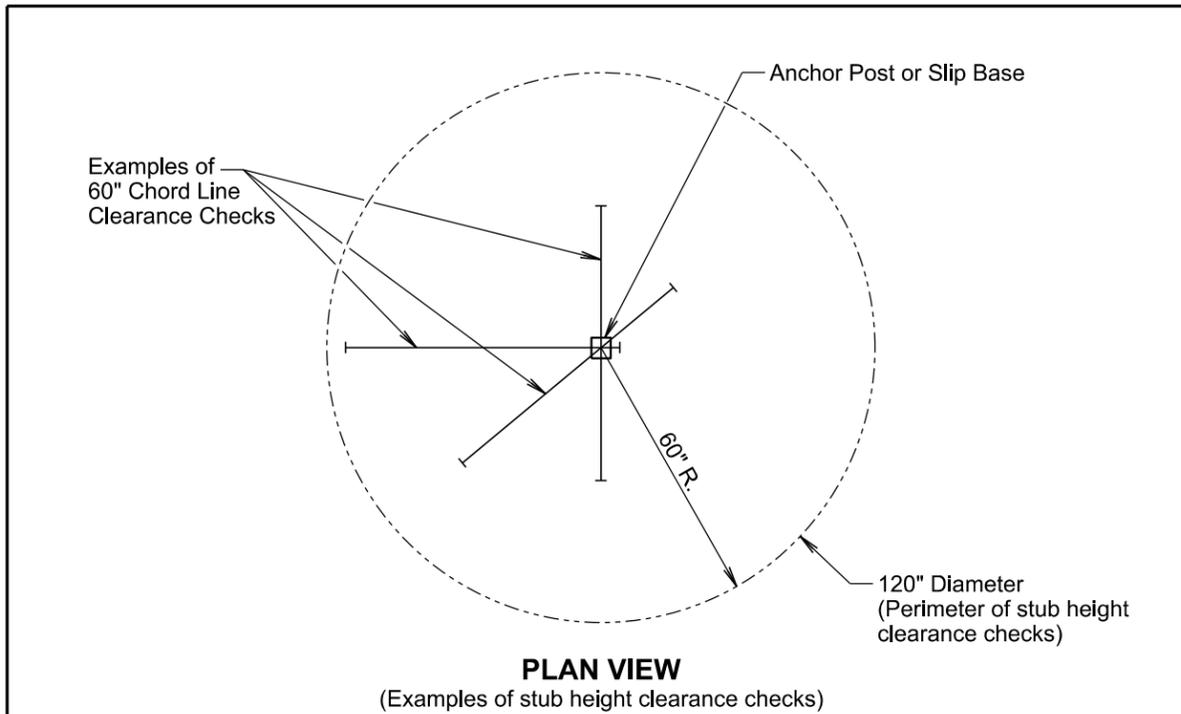


* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 1st Qtr. 2023	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1

PLOTTED FROM - TRAB17882



GENERAL NOTES:

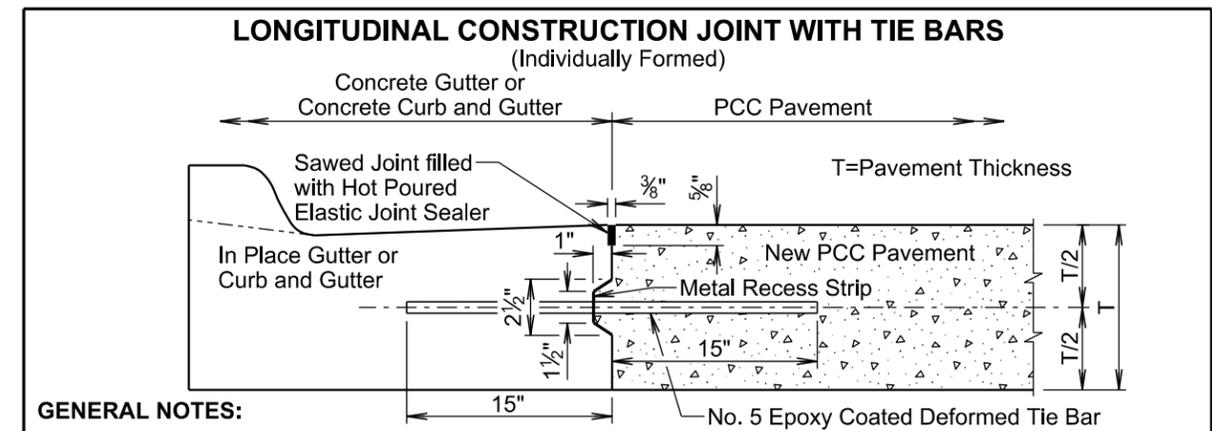
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 1st Qtr. 2023	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER
			634.99
			Sheet 1 of 1



GENERAL NOTES:

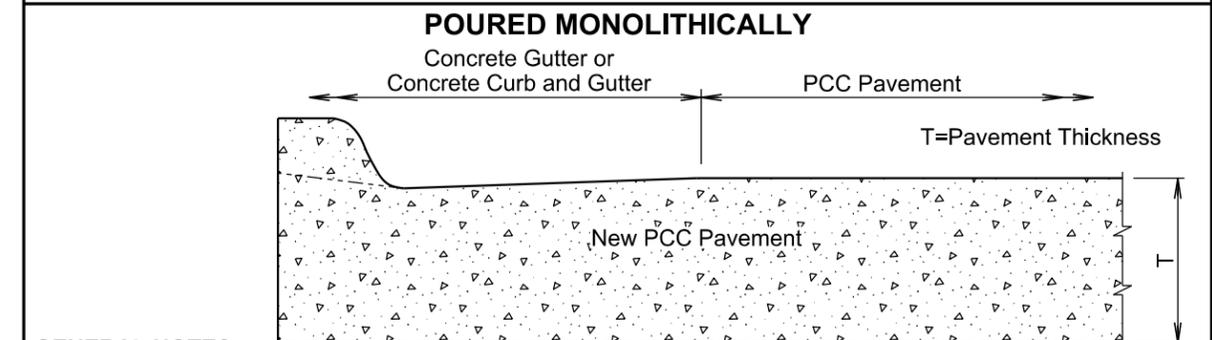
No. 5 epoxy coated deformed tie bars will be spaced 48 inches center to center. The keyway shown above is a female keyway.

The tie bars will be placed a minimum of 15 inches from existing transverse contraction joints.

The keyway is optional and is not required. When concrete pavement is formed and a keyway is provided, a metal recess strip will be used. When concrete pavement is slip formed, a metal recess strip is not required.

The transverse contraction joints in the concrete gutter or concrete curb and gutter will be placed at each mainline PCC pavement transverse contraction joint. The transverse contraction joints in the concrete gutter or the concrete curb and gutter will be 1 1/2 inches deep if formed in fresh concrete using a suitable grooving tool. If a saw is used to cut the transverse contraction joints, then the depth of the joint will be at least 1/4 the thickness of the concrete gutter or concrete curb and gutter.

The term "In Place Gutter or Curb and Gutter" in the above drawing indicates that the in place concrete gutter and concrete curb and gutter was placed on the current project.



GENERAL NOTES:

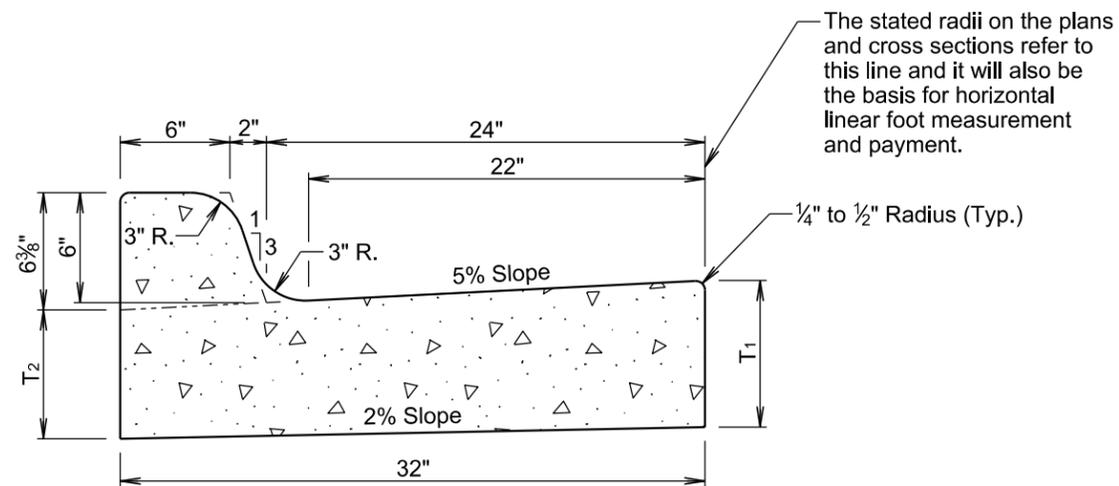
The mainline curb and gutter may be placed monolithically with the PCC pavement if the mainline lane width is less than or equal to 12 feet. If this method of construction is used, the tie bars and the sawed joint between the curb and gutter and the PCC pavement will be eliminated.

The gutter or curb and gutter will be sawed transversely at each mainline transverse contraction joint. The transverse contraction joints in the gutter or curb and gutter will be sawed and sealed same as the transverse contraction joints in the PCC pavement.

The slope of the gutter will be the slope designated for the type of gutter or curb and gutter to be constructed. The bottom slope of the gutter or curb and gutter will be constructed at the same slope as the mainline concrete pavement.

November 19, 2022

Published Date: 1st Qtr. 2023	S D D O T	PCC PAVEMENT LONGITUDINAL CONSTRUCTION JOINTS WITH CONCRETE GUTTER OR CONCRETE CURB AND GUTTER	PLATE NUMBER
			380.21
			Sheet 1 of 1



TYPE B CONCRETE CURB AND GUTTER					
Type	T ₁ (Inches)	T ₂ (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.	
B66	6	5 ¹ / ₁₆	0.057	17.7	
B67	7	6 ¹ / ₁₆	0.065	15.4	
B68	8	7 ¹ / ₁₆	0.073	13.7	
B68.5	8.5	7 ⁹ / ₁₆	0.077	13.0	
B69	9	8 ¹ / ₁₆	0.081	12.3	
B69.5	9.5	8 ⁹ / ₁₆	0.085	11.7	
B610	10	9 ¹ / ₁₆	0.090	11.2	
B610.5	10.5	9 ⁹ / ₁₆	0.094	10.7	
B611	11	10 ¹ / ₁₆	0.098	10.2	
B611.5	11.5	10 ⁹ / ₁₆	0.102	9.8	
B612	12	11 ¹ / ₁₆	0.106	9.4	

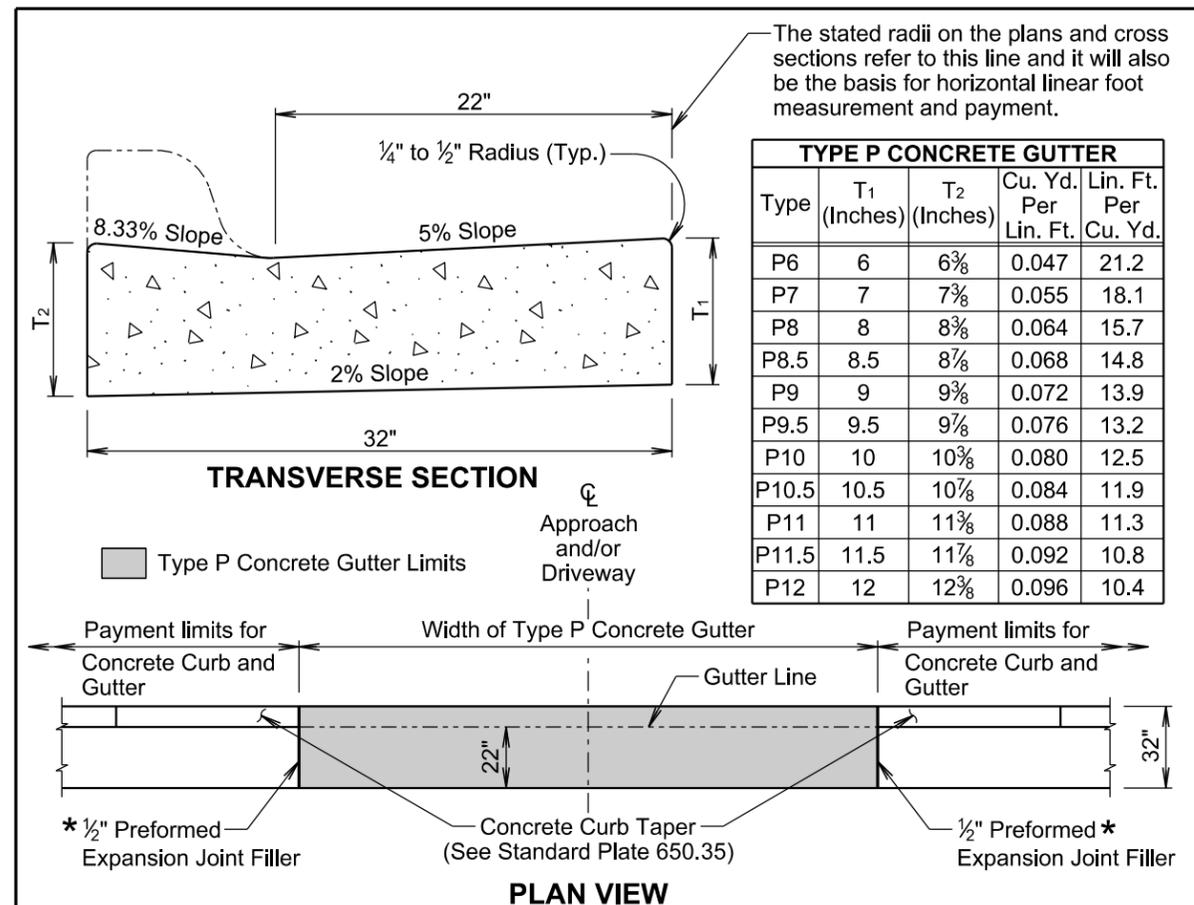
GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.11.

See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

December 23, 2019

Published Date: 1st Qtr. 2023	S D D O T	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
			Sheet 1 of 1



TYPE P CONCRETE GUTTER					
Type	T ₁ (Inches)	T ₂ (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.	
P6	6	6 ³ / ₈	0.047	21.2	
P7	7	7 ³ / ₈	0.055	18.1	
P8	8	8 ³ / ₈	0.064	15.7	
P8.5	8.5	8 ⁷ / ₈	0.068	14.8	
P9	9	9 ³ / ₈	0.072	13.9	
P9.5	9.5	9 ⁷ / ₈	0.076	13.2	
P10	10	10 ³ / ₈	0.080	12.5	
P10.5	10.5	10 ⁷ / ₈	0.084	11.9	
P11	11	11 ³ / ₈	0.088	11.3	
P11.5	11.5	11 ⁷ / ₈	0.092	10.8	
P12	12	12 ³ / ₈	0.096	10.4	

* Joint will not be needed if concrete curb and gutter and type P concrete gutter is placed at the same time. If the 1/2 inch preformed expansion joint filler is provided, then the joint will be sealed in accordance with standard plate 650.90.

GENERAL NOTES:

The concrete for the type P concrete gutter will comply with the requirements of the specifications for class M6 concrete.

When concrete gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.11.

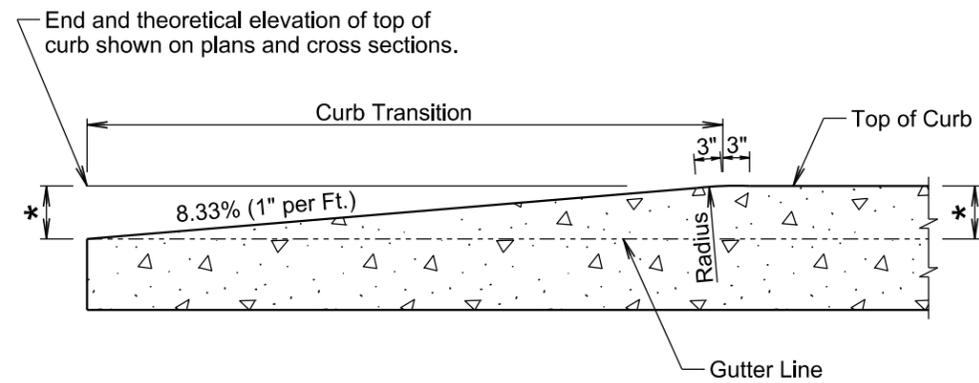
Transverse contraction joints will be constructed at 10-foot intervals in the concrete gutter except when concrete gutter is constructed adjacent to mainline PCC pavement. When concrete gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint will be constructed in the concrete gutter at each mainline PCC pavement transverse contraction joint location.

When concrete gutter is placed monolithically with mainline PCC pavement, the transverse contraction joints in the concrete gutter will be sawed and sealed the same as the transverse contraction joints in the mainline PCC pavement.

When concrete gutter is not placed monolithically with the mainline PCC pavement and when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete gutter will be 1 1/2 inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least 1/4 the thickness of the concrete.

December 23, 2019

Published Date: 1st Qtr. 2023	S D D O T	TYPE P CONCRETE GUTTER	PLATE NUMBER 650.30
			Sheet 1 of 1

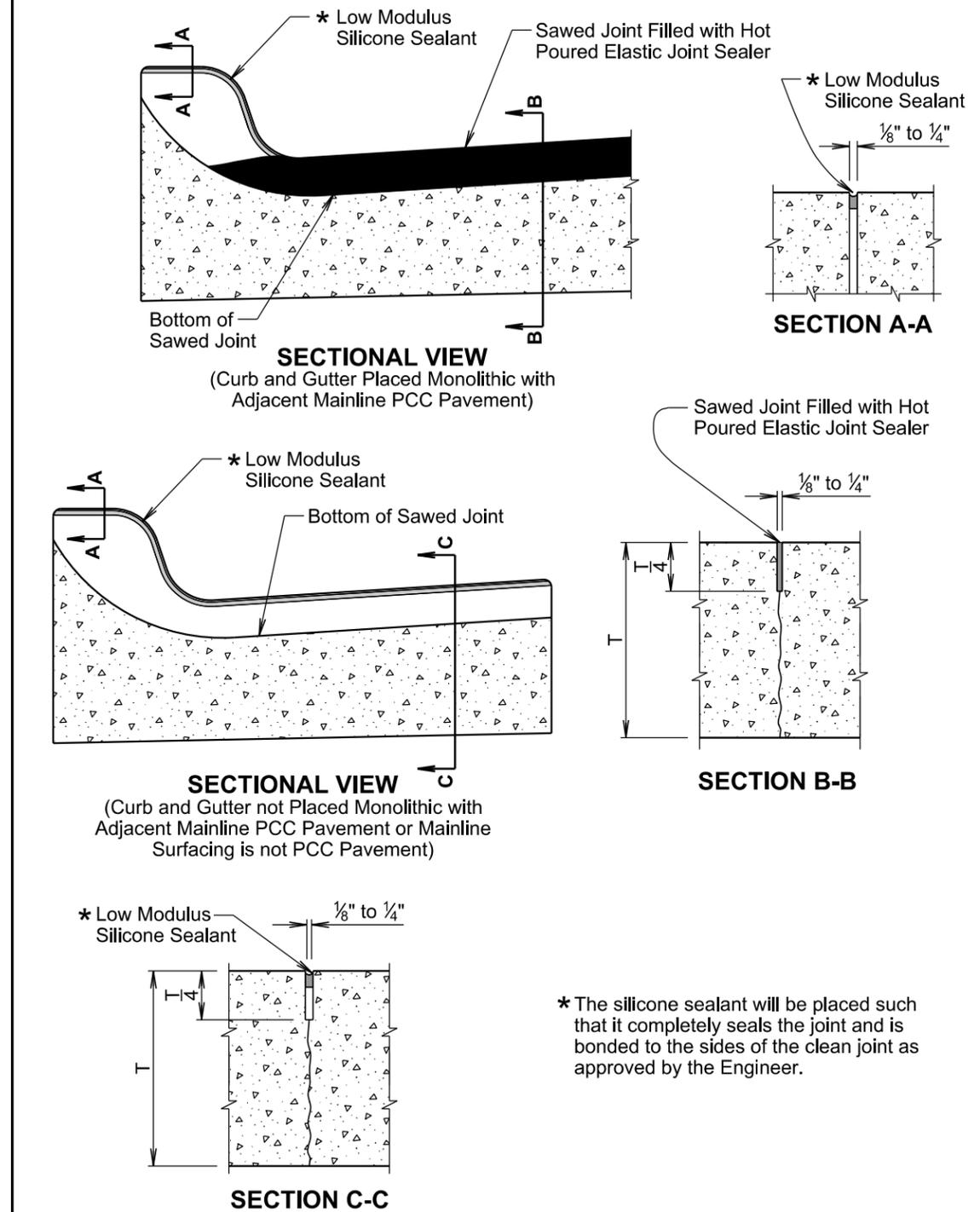


LONGITUDINAL SECTION
(Concrete Curb Taper)

* Height of Curb

December 23, 2019

Published Date: 1st Qtr. 2023	S D D O T	CONCRETE CURB TAPER	PLATE NUMBER 650.35
			Sheet 1 of 1



SECTIONAL VIEW
(Curb and Gutter Placed Monolithic with
Adjacent Mainline PCC Pavement)

SECTIONAL VIEW
(Curb and Gutter not Placed Monolithic with
Adjacent Mainline PCC Pavement or Mainline
Surfacing is not PCC Pavement)

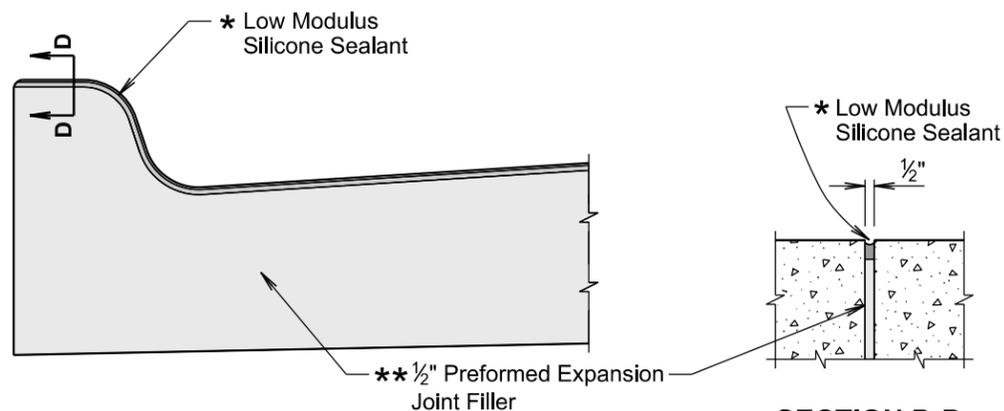
SECTION C-C

* The silicone sealant will be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

December 23, 2019

Published Date: 1st Qtr. 2023	S D D O T	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 1 of 2

PLOTTED FROM - TRAB17882



SECTIONAL VIEW
(Curb and Gutter at 1/2" Preformed
Expansion Joint Filler Location)

SECTION D-D

* The silicone sealant will be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

GENERAL NOTES:

For illustrative reason, only the type B curb and gutter is shown.

** A 1/2-inch preformed expansion joint filler will be placed transversely in the curb and gutter at the following locations:

At each junction between the radius return of curb and gutter, and curb and gutter which is parallel to the project centerline.

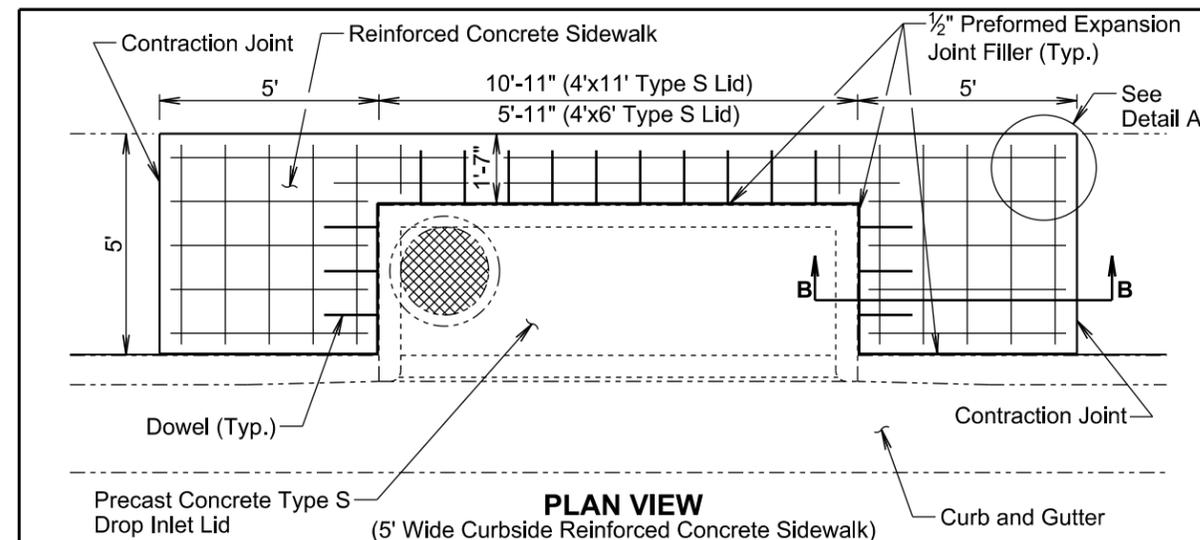
At each junction between new curb and gutter and existing curb and gutter.

Transverse contraction joints will be constructed at 10 foot intervals in the concrete curb and gutter except when the concrete curb and gutter is constructed adjacent to mainline PCC pavement. When concrete curb and gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint will be constructed in the concrete curb and gutter at each mainline PCC pavement transverse contraction joint location.

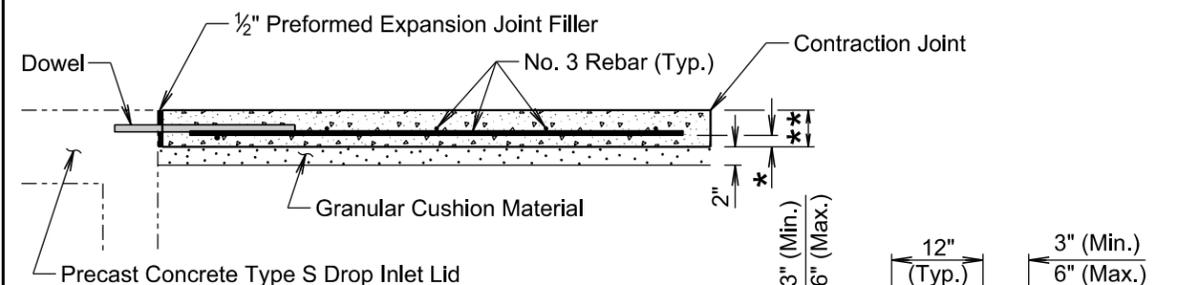
When concrete curb and gutter is not placed monolithically with the mainline PCC pavement or when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete curb and gutter will be 1 1/2 inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least 1/4 the thickness of the concrete and the joint will be sealed in accordance with the details shown above.

December 23, 2019

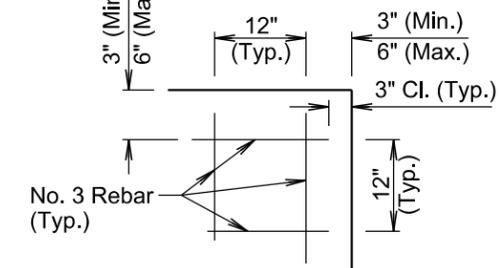
Published Date: 1st Qtr. 2023	S D D O T	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 2 of 2



PLAN VIEW



SECTION B-B



DETAIL A

** 4", 5", or 6" as specified elsewhere in the plans.

* 1 5/8" for 4" sidewalk, 2 1/8" for 5" sidewalk, and 2 5/8" for 6" sidewalk.

GENERAL NOTES:

The precast concrete Type S lids shown are 4'x11' for illustrative purpose.

The cross slope of the sidewalk and precast concrete type S drop inlet lid will be as specified elsewhere in the plans.

The reinforcing steel will conform to Section 1010 of the Specifications. The Contractor will be in conformance with the construction requirements of Section 480.3 of the Specifications.

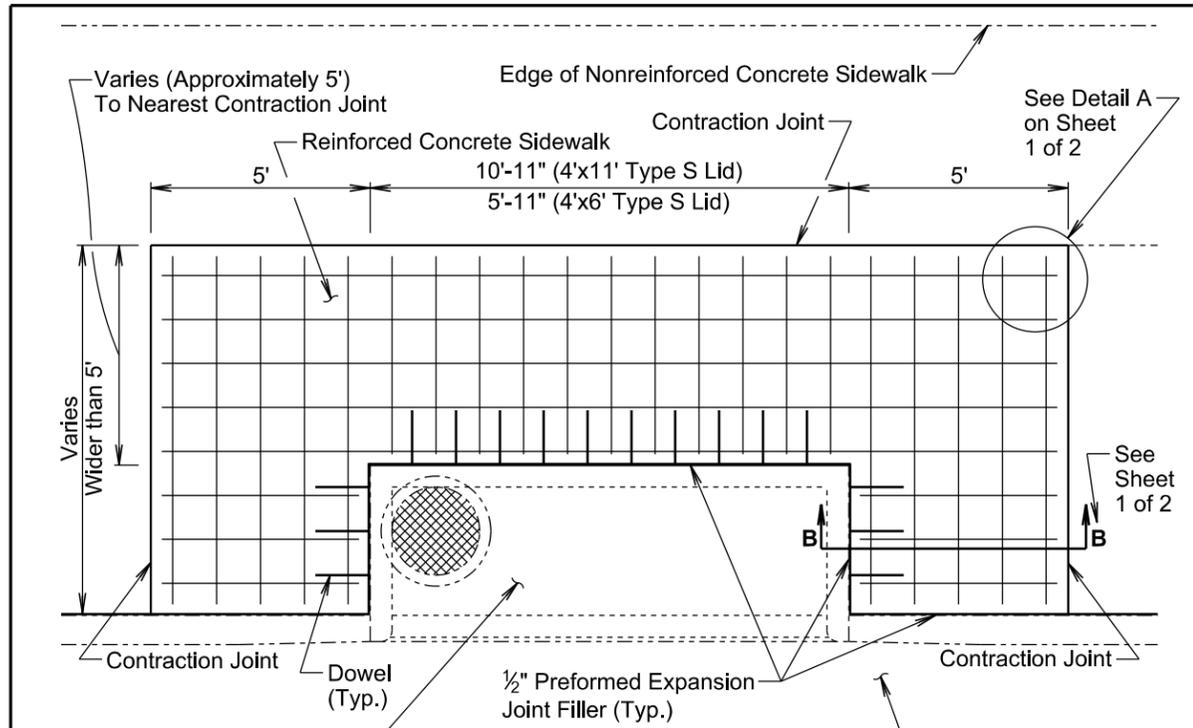
When lapping of reinforcing steel is necessary, the No. 3 rebar will be lapped 12".

The reinforced concrete sidewalk will conform to the requirements of Section 651 of the Specifications.

All costs for constructing the reinforced concrete sidewalk including labor, equipment, tools, backfilling, furnishing and placing materials, including granular cushion, reinforcing steel, preformed expansion joint filler, and incidentals will be included in the contract unit price per square foot for the corresponding reinforced concrete sidewalk contract item.

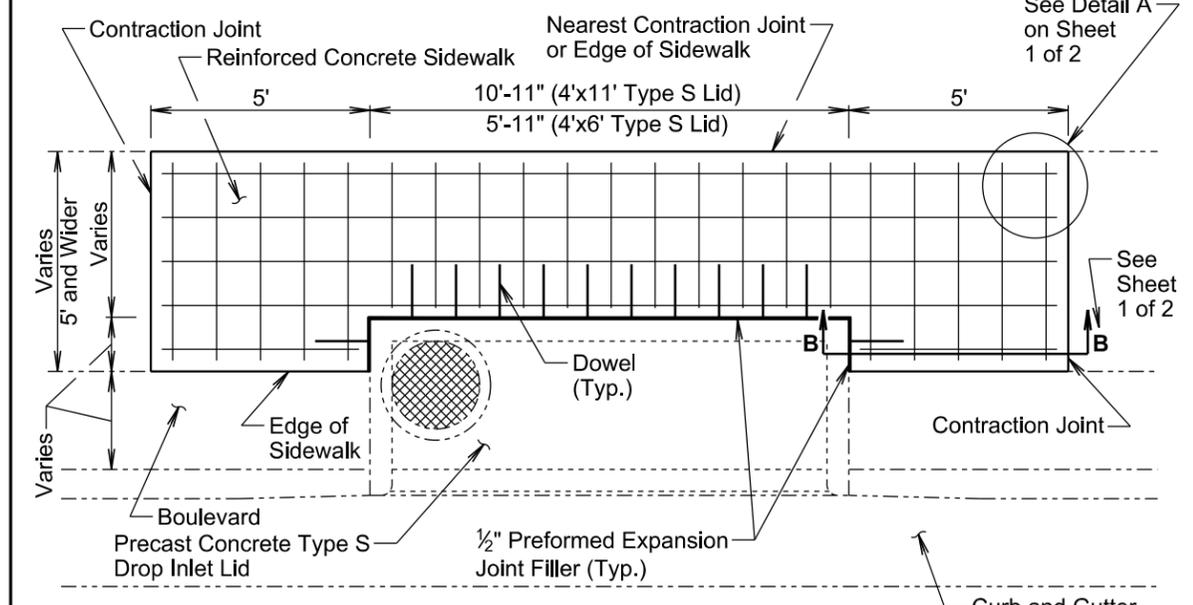
February 14, 2020

Published Date: 1st Qtr. 2023	S D D O T	REINFORCED CONCRETE SIDEWALK ADJACENT TO PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 651.70
			Sheet 1 of 2



PLAN VIEW

Precast Concrete Type S Drop Inlet Lid (Curbside Reinforced Concrete Sidewalk Wider Than 5') Curb and Gutter

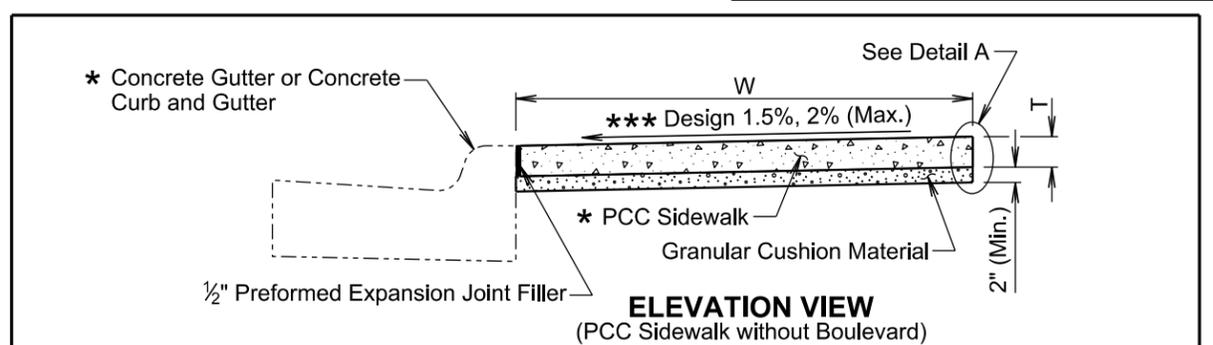


PLAN VIEW

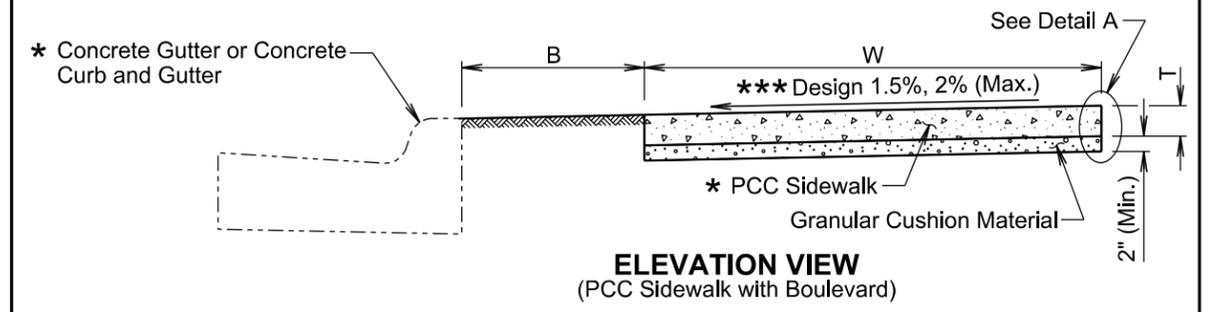
(Reinforced Concrete Sidewalk With Boulevard)

February 14, 2020

Published Date: 1st Qtr. 2023	S D D O T	REINFORCED CONCRETE SIDEWALK ADJACENT TO PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 651.70
			Sheet 2 of 2

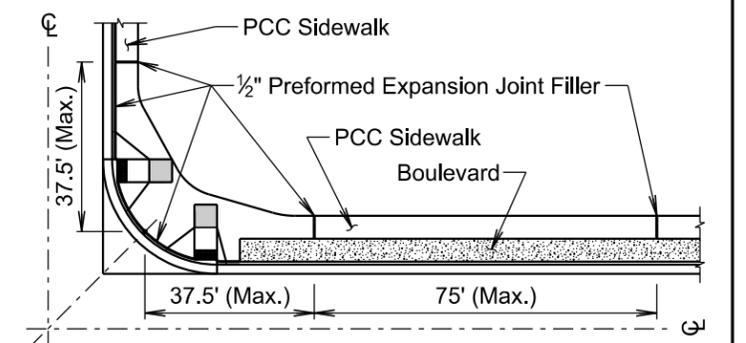


ELEVATION VIEW
(PCC Sidewalk without Boulevard)



ELEVATION VIEW
(PCC Sidewalk with Boulevard)

- B Width of boulevard as specified in the plans.
- T Thickness of PCC sidewalk as specified in the plans.
- W Width of PCC sidewalk as specified in the plans.
- * Type as specified in the plans.



PLAN VIEW

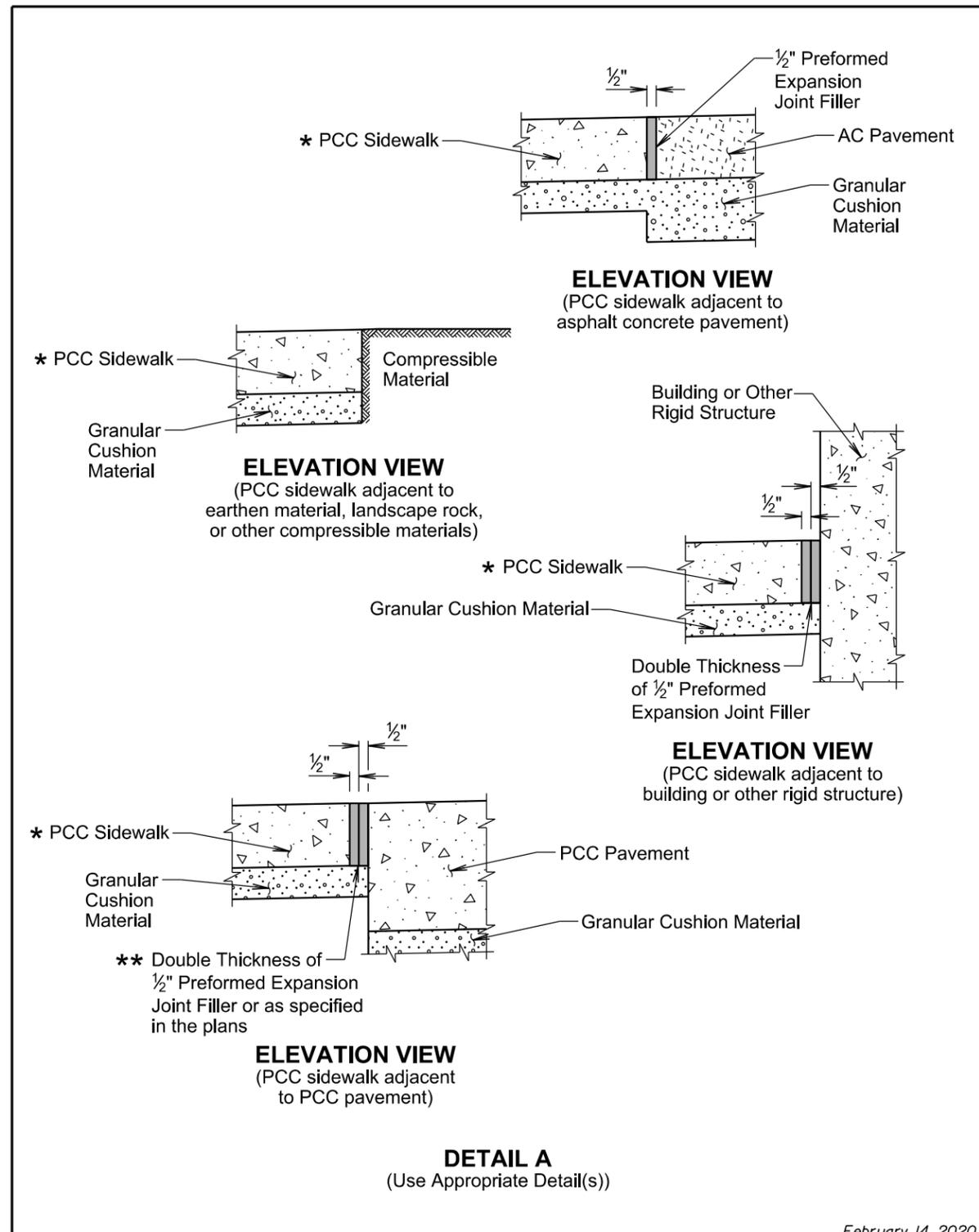
GENERAL NOTES:

- The PCC sidewalk will be constructed in accordance with Section 651 of the Specifications.
- *** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.
- The maximum length between expansion joints in the PCC sidewalk is 75 feet.
- PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.
- An expansion joint in the PCC sidewalk will consist of a 1/2 -inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.
- ** Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

February 14, 2020

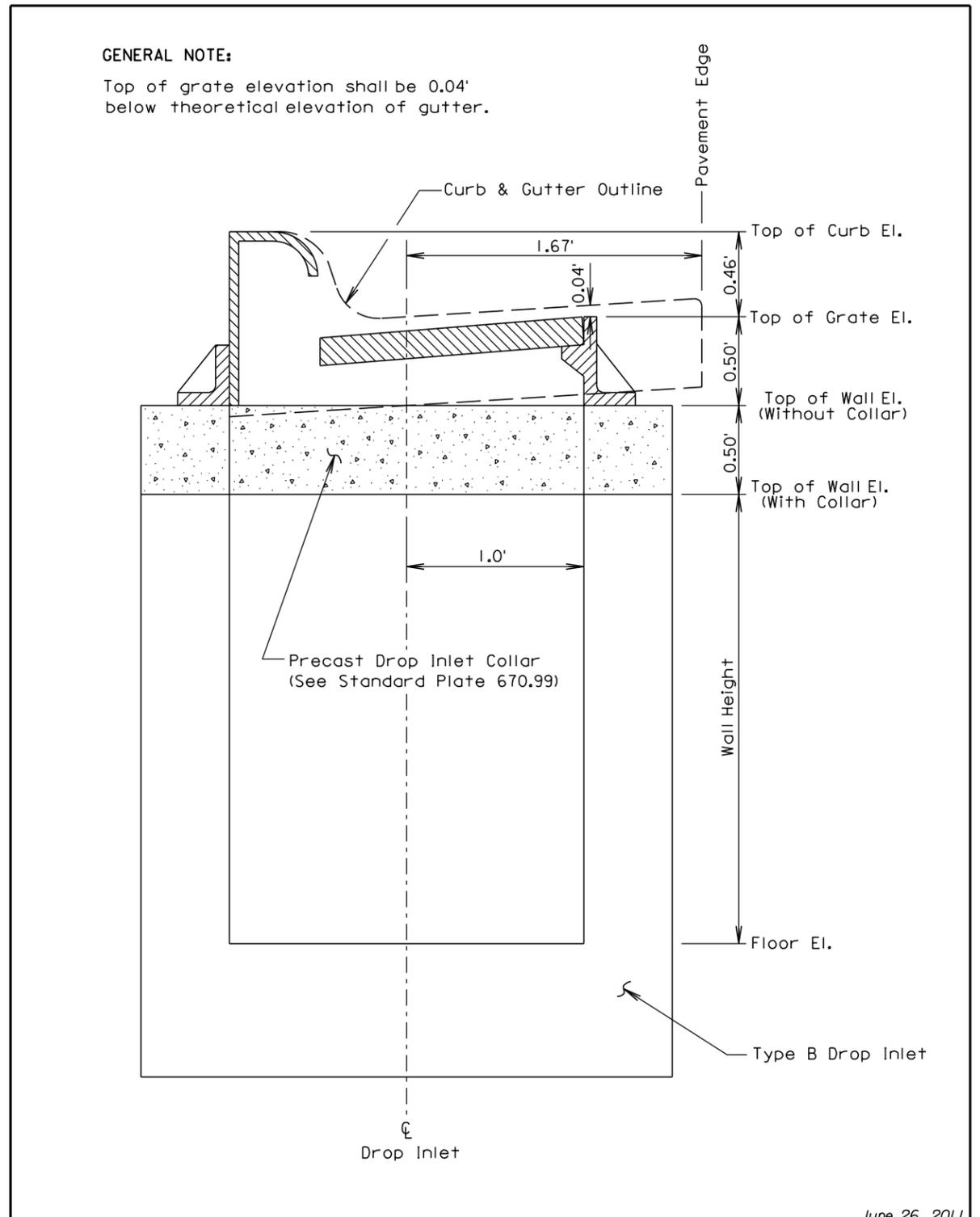
Published Date: 1st Qtr. 2023	S D D O T	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 1 of 2

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February 14, 2020

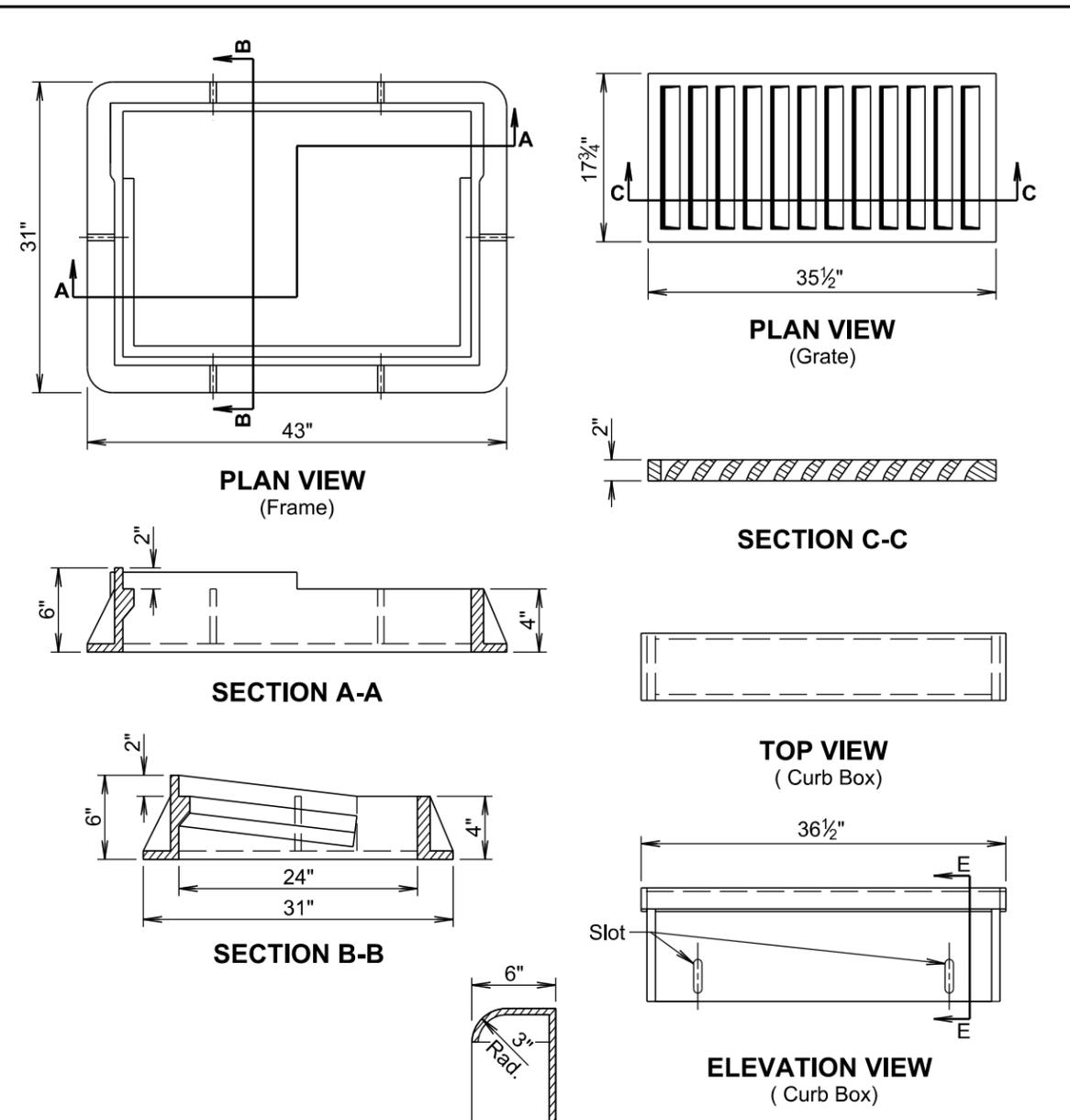
Published Date: 1st Qtr. 2023	S D D O T	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 2 of 2



June 26, 2011

Published Date: 1st Qtr. 2023	S D D O T	INSTALLATION OF TYPE B DROP INLET	PLATE NUMBER 670.75
			Sheet 1 of 1

PLOTTED FROM - TRAB17882



GENERAL NOTES:

The product dimensions may vary from those shown on the standard plate depending on the manufacturer. Grate size and configuration will be similar to the standard plate for hydraulic capacity and bicycle safety. Any variation in dimensions will be approved by the Engineer and the type B frame and grate assembly will be from a manufacturer on the approved products lists.

Design load for the grate will meet the requirements of AASHTO HL-93.

The curb box will be adjustable 6" to 9".

June 1, 2022

<i>Published Date: 1st Qtr. 2023</i>	S D D O T	TYPE B FRAME AND GRATE	PLATE NUMBER 670.80
			Sheet 1 of 1